



Application Instructions

For product description refer to product data sheet

HEMPADUR 87540

BASE 87549 with CURING AGENT 97740

Scope: These Application Instructions cover surface preparation, application equipment and application details on HEMPADUR 87540.

Surface preparation: **When used as a heavy duty coating for rehabilitation of old buried pipelines:**

Abrasive grit blasting to minimum Sa 2½. Recommended surface profile is Rz 75-100 micron/3-4 mils, corresponding to Rugotest No. 3, BN10, Keane-Tator Comparator, minimum 3.0 G/S, or ISO Comparator, Medium (G). Oil and grease must be removed with suitable detergent, salts and other contaminants by (high pressure) fresh water cleaning prior to blasting. After blasting clean the surface carefully from abrasives and dust.

Severely pitted areas may call for further water washing at a pressure of min. 300 bar/4350 psi and repeated abrasive blasting.

When used as a heavy duty coating for factory application of pipe fittings and pipe bends:

Oil and grease to be removed by suitable detergent, salts and other contaminants by high pressure fresh water hosing prior to blasting. Abrasive grit blasting to Sa 2½. Recommended surface profile is Rz 75-100 micron/3-4 mils, corresponding to Rugotest No. 3, BN 10 or ISO Comparator, Medium (G).

Application equipment: HEMPADUR 87540, being a solvent free, high viscosity material, requires special measures to be taken during application. Spray application can only be carried out with **dual feed hot airless equipment** with proportioning pump adjusted to mixing ratio 2:1. Heated storage tanks with agitators, material feed pumps, fluid heaters, solvent flushing pump, one mixer manifold assembly and one mixer tube are required. Other spray systems may be used. Please consult HEMPEL for more details.

Supply hose: min. 3/8" preferably insulated and heated
max. length 25 metres

Spray hose: 1/4"
max. length 3 metres

Nozzle size: .024" - .031", reversible

Procedure: **Storage:** It is recommended to store the paint under heated conditions the last 1-2 days before taken into use, preferably at 40°C/104°F, which will ease emptying the cans into the mixer tanks.
Maximum storage temperature for both base 87549 and curing agent 97740, 40°C/104°F.

Start-up: Transfer the two components base 87549 and curing agent 97740 into two storage tanks.

Heating of the base material 87549 and curing agent 97740 is required to reduce the viscosity. The optimum spray temperature is around 55-60°C/131-140°F (at the nozzle).

Circulate the material until the output pressure of the three main pump cylinders is identical - between 160-200 bar/2175-2900 psi and the material temperature is typically 55-60°C/131-140°F maximum 80°C/176°F. This is valid for both base and curing agent. When this has been achieved, the material is ready for spraying. Recirculation should be stopped.

If some or all of the cylinders show too low pressure and no leaks are visible, it may indicate that the viscosity of the material is too high. In this case, further heating of the base is required.

HEMPEL

Application Instructions



HEMPADUR 87540

Please note that the output pressure of the two supply pumps should always be lower than that of the proportioning pump cylinders. Maximum recommended output pressure of supply pumps is 10 bar/140 psi.

Before application, the mixing ratio should be checked (on heated product). Close the valve to the re-circulation hoses. Measure the volumetric material flow of the two components separately at the outlets just after the dosing cylinders.

Base : curing agent: 2 : 1 by volume

Please also refer to the user's manual of the spray equipment

Spraying: During the first few seconds of spraying, the spray fan will often "finger" due to the reaction of the mixed material in the hoses and gun.

If any breaks in the spraying have occurred, start again by emptying the spray gun, hose and static mixer by spraying into an empty drum.

Note: Due to the very short pot life of this coating, the following should be observed:

- Use reversible nozzle for fast cleaning in case of nozzle blockage.
- In principle, spray continuously with as few stops as possible.
- Be sure that the flush pump system is on stand-by under full pressure at all times.
- Have the necessary tools ready for immediate disconnection of spray hose from static mixer if spraying has been discontinued for more than one minute.

The best distance between spray gun and substrate to be coated is approximately 30 cm/1 ft.

It is recommended to do at least three passes (depending on the size of the nozzle) wet-in-wet in order to build up a pinhole-free paint film in the specified film thickness.

Applied wet film thickness should be checked by using a wet film gauge (comb). It is recommended to coat flat steel panels and check the wet film thickness on these, prior to start the coating of the object itself.

When coating long sections of pipelines, the whole section planned for coating, should be coated without making breaks, and if necessary by using replacement teams.

Control:

- As an extra check of correct mixing ratios, evaluate the "dry to touch" time. If longer than indicated this may indicate insufficient or incorrect mixing.
- All three main pump cylinders must show same or almost same output pressure. Especially their movements following charging and discharging of the pistons must be synchronous and within the same order of magnitude.

Drying/curing:

Steel temperature	25°C/77°F	50°C/122°F
Dry to touch	45 minutes	15 minutes
Time for pore testing and to backfill	3 hours	30 minutes

Temperature of the mixed paint	60°C/140°F
Pot life	3 minutes

Cleaning of equipment:

Proper equipment cleaning is essential for a successful operation.

Because of the very short pot life of the mixed product, immediately after finishing the application, the pump, hose and gun must be flushed with plenty of **HEMPEL'S TOOL**



HEMPADUR 87540

CLEANER 99610 or HEMPEL'S THINNER 08450. Keep flushing until the cleaner looks clear and clean.

After all the material has been removed from pump and hoses, the surge valve should be flushed and the suction pipes cleaned.

Topcoating:

HEMPADUR 87540 should be applied to specified thickness in one operation.

Damaged areas:

Coating damaged during testing for continuity of paint film or damaged through handling may be ground down to bare steel and repaired with HEMPADUR 87540 or HEMPEL'S MULTI-MIL 35430.

Safety:

Handle with care. Before and during use, observe all safety labels on packaging and paint containers, consult HEMPEL Material Safety Data Sheets and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin and eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well ventilated areas.

ISSUED BY:

HEMPEL A/S - 8754050700CR004

This Product Data Sheet supersedes those previously issued.

For explanations, definitions and scope, see "Explanatory Notes" in the HEMPEL Book.

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